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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/925,798	08/09/2001	Edward C. Douglas	RTN2-019AUS	5368
	90 01/31/2002			
•	WLEY & MOFFORI	EXAMINER		
SUITE 101 275 TURNPIK CANTON, MA		CHAMBLISS, ALONZO		
CANTON, MA	02021-2310		ART UNIT	PAPER NUMBER
			2827	
		DATE MAILED: 01/31/2002		

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)	()
Office Action Summary	09/925,798	EDWARD C. DOUG	}LAS
omee Action Summary	Examiner	Art Unit	
The MAILING DATE of this communication	Alonzo Chambliss	2827	
The MAILING DATE of this communication app Period for Reply	ears on the cover sheet with	the correspondence add	ress
A SHORTENED STATUTORY PERIOD FOR REPLY THE MAILING DATE OF THIS COMMUNICATION.  - Extensions of time may be available under the provisions of 37 CFR 1.13 after SIX (6) MONTHS from the mailing date of this communication.  - If the period for reply specified above is less than thirty (30) days, a reply - If NO period for reply is specified above, the maximum statutory period w - Failure to reply within the set or extended period for reply will, by statute, - Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).  Status	36(a). In no event, however, may a reply within the statutory minimum of thirty (ill apply and will expire SIX (6) MONTH-	ly be timely filed  30) days will be considered timely. IS from the mailing date of this con	nmunication.
1) Responsive to communication(s) filed on <u>09 A</u>	<u>lugust 2001</u> .		
2a) ☐ This action is <b>FINAL</b> . 2b) ☑ Thi	s action is non-final.		
3) Since this application is in condition for allowa closed in accordance with the practice under <i>I</i>	nce except for formal matte Ex parte Quayle, 1935 C.D.	rs, prosecution as to the 11, 453 O.G. 213.	merits is
Disposition of Claims	•		
4)⊠ Claim(s) <u>11,12,14 and 15</u> is/are pending in the	application.		
4a) Of the above claim(s) is/are withdraw	• •		
5)☐ Claim(s) is/are allowed.			
6)⊠ Claim(s) <u>11,12,14 and 15</u> is/are rejected.			
7) Claim(s) is/are objected to.			
8) Claim(s) are subject to restriction and/or	election requirement		
Application Papers	orden requirement.		
9)⊠ The specification is objected to by the Examiner			
10)⊠ The drawing(s) filed on <u>11 September 2001</u> is/ar		ected to by the Evaminer	
Applicant may not request that any objection to the			
11)☐ The proposed drawing correction filed on			
If approved, corrected drawings are required in repl			
12)☐ The oath or declaration is objected to by the Exa	miner.		
Priority under 35 U.S.C. §§ 119 and 120			
13) Acknowledgment is made of a claim for foreign	priority under 35 U.S.C. § 1	19(a)-(d) or (f).	
a) ☐ All b) ☐ Some * c) ☐ None of:	. ,	( ) ( ) -	
1. Certified copies of the priority documents	have been received.		
2. Certified copies of the priority documents		lication No.	
Copies of the certified copies of the priori     application from the International Bure     * See the attached detailed Office action for a list of	ty documents have been re eau (PCT Rule 17.2(a)).	ceived in this National St	age
14) ☐ Acknowledgment is made of a claim for domestic			nnlication)
a) The translation of the foreign language prov	visional application has beer	n received.	ρριισαιίστη.
15) Acknowledgment is made of a claim for domestic	priority under 35 U.S.C. §§	120 and/or 121.	
Attachment(s)  1) Notice of References Cited (RTO 802)	. <b>.</b>		
<ol> <li>Notice of References Cited (PTO-892)</li> <li>Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> <li>Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.</li> </ol>		nmary (PTO-413) Paper No(s). rmal Patent Application (PTO-1	
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Art Unit: 2827

#### **DETAILED ACTION**

Page 2

1. Claims 1-10, 13, and 16 have been canceled.

2. Pre-amendment A filed on 8/9/01 has been fully considered and made of record in paper no. 4.

#### Information Disclosure Statement

3. The information disclosure statement submitted on 8/9/01 was filed before the mailing date of the non-final rejection on 1/24/02. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the petition is granted and the information disclosure statement is being considered by the examiner.

### **Drawings**

- 4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: Fig. 2B' on page 7 line 26. Also, the drawings are objected to because they include the following reference sign(s) not mentioned in the description: 29, 46, 50, and 57. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
- 5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters " 28 " and " 32 " have both been used to designate B-

Art Unit: 2827

stage epoxy and sidewalls. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

## Specification

6. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The following title is suggested: "METHOD OF FABRICATING AN INTEGRATED CIRCUIT CHIP PACKAGE".

## Claim Rejections - 35 USC § 112

- 7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

  The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
- 8. Claims 11, 12, 14, and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
- 9. In claims 11, 12, 14, and 15, the phrase "adapted to "is vague and indefinite since it is not clear what applicant intended to cover by the recitation "adapted ". Adapted implies that the integrated circuit chip does or does not have to operate at microwave frequencies. Furthermore, the phrase "adapted to "merely states an intended use without structure for making the modification.

Art Unit: 2827

- 10. Claim 11 recites the limitation "the package", "integrated circuit chip ", "cover ", and "base section "in lines 11-13, respectively. There is insufficient antecedent basis for these limitations in the claim.
- 11. In claims 11 and 12, the phrase "integrated circuit chip being disposed within a cavity formed by affixed cover and base section "is vague and indefinite since it is not clear where the integrated circuit chip is relative to the base section.
- 12. Claims 14 and 15 recite the limitation "integrated circuit chip" in lines 15 and 16. There is insufficient antecedent basis for this limitation in the claim.
- 13. In claim 14, the phrase "aperture dielectric " is vague and indefinite since it is not clear what applicant is referring by aperture dielectric.
- 14. Claim 15 recites the limitation "dielectric member" in lines 6 and 7. There is insufficient antecedent basis for this limitation in the claim.

# Claim Rejections - 35 USC § 103

- 15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
  - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 16. Claims 11, 12, 14, and 15, **insofar as some of them being definite**, are rejected under 35 U.S.C. 103(a) as being unpatentable over Brathwaite et al. (U.S. 5,455,386) in view of Rosenstock (WO 94/17552).

Art Unit: 2827

With respect to Claim 11, Brathwaite discloses a lead frame 74 having electrical leads extending outwardly form an inner region of the lead frame 74. A base section 52 is adhesively affixed to the lead frame by adhesive 66 with portion of the electrical leads 84 extending outwardly form the base 52 (see Fig. 2). The base 52 is made of plastic (see col. 1 lines 23-25). Electrical wires 80 are connected between the chip 51 and the electrical leads 84. A cover 54 is affixed to the base section by adhesive 66, wherein the cover 54 has a cavity 78 for accommodating the chip 51 (see Fig. 2).

Although Brathwaite does not explicitly disclose the preamble of claim 1, " adapted to operate at microwave frequencies, " this preamble is merely a statement of intended use which does not result in a structural difference between the claimed process and the process of Brathwaite. Furthermore, the process of Brahwaite is inherently capable of being used for the intended use, the statement of intended use does not patentably distinguish the claimed process from the process of Brathwaite.

Brathwaite does not explicitly disclose a lead frame having a plurality of sites, wherein each site has electrical leads affixed to a base section, electrical wires between the chip and the electrical leads, and a cover with a cavity to encapsulated the each chip that is adhesively affixed to the base section. However, with respect to Claim 12, Brathwaite as stated above discloses all of the elements in one lead frame site. To form a plurality of sites each containing electrical leads affixed to a base section, electrical wires between the chip and the electrical leads, and a cover with a cavity to encapsulated the each chip that is adhesively affixed to the base section instead of just one would be obvious to one skill in the art at the time, since in the absent of new and

Art Unit: 2827

unexpected results duplicating parts is obvious. The court held that mere duplication of parts has no patentable significance unless a new and unexpected result is produced. *In re Harza, 274 F. 2d 669, 124 USPQ 378 (CCPA 1960).* Therefore, the duplication of a plurality of sites does not patentably distinguish from the claimed process of Brathwaite.

Brathwaite discloses an aperture in the base 52 for registering with the chip 51 (see Fig. 2). Brathwaite fails to disclose electrically connecting a conductive member (i.e. inner portions of a lead frame) to base section to a bottom ground plane conductor of the chip with an dielectric material between the lead frame and the conductive member. However, with respect to Claims 14 and 15, Rosenstock discloses electrically connecting a conductive member (i.e. base plate 71) to base section 65 to a bottom ground plane conductor of the chip 70 with an dielectric material 74 is between the lead frame and the conductive member 71 (see English abstract and Figs. 3a-3c). therefore, it would have been obvious to use the ground plane conductor of the chip with an dielectric material between the lead frame and the conductive member with Brathwaite, since the package would offer a low inductance ground path, good thermal characteristics, and low parasitic inductance and capacitance as taught by Rosenstock.

#### Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. It is cited primarily to show processes of packaging a

semiconductor device, which are similar to the process of the instant invention.

Any inquiry concerning the communication or earlier communications from the examiner should be directed to Alonzo Chambliss whose telephone number is (703) 306-9143. The fax phone number for this Group is (703) 308-7722 or 7724. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-7956.

DAVID L. TALBOTT PRIMARY EXAMINER

ART UNIT 355 2827

AL

AC/January 24, 2002